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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,258	02/11/2000	Christoph Wuersch	32396	4922

116 7590 03/24/2004

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CLEVELAND, OH 44114-3108

EXAMINER
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NI, SUHAN

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/502,258

Applicant(s)

WUERSCH, CHRISTOPH

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

**DETAILED ACTION**

1. This communication is responsive to the amendment (E) filed on 01/05/2004.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 8-9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson (U. S. Pat. - 4,956,868).

Regarding claims 1 and 8-9, Carlson discloses a microphone (Figs. 1-3) for hearing aid, the microphone being encapsulated in an electromagnetic shielding case (23) forming a shielded microphone system unit. But Carlson does not clearly teach other subsequent signal processing components as claimed. Since providing any suitable signal processing components hearing aid is very well known in the art, it therefore would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide all necessary signal processing component, such as an ADC, AMP and DAC for the hearing aid for providing a more desirable hearing aid having more advanced DSP technology.

3. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson (U. S. Pat. - 4,956,868) in view of Husung (U. S. Pat. - 5,809,151).

Regarding claims 2 and 5, Carlson does not clearly disclose that the signal processing components including ADC are encapsulated in a shielding case as claimed. Husung discloses an

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electromagnetic shielding case (15) for IC components of a hearing aid (Fig. 1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide the electromagnetic shielding case taught by Husung for the signal processing components, such as ADC of a hearing aid as an alternate choice for further reducing electromagnetic noises.

Regarding claim 3, Carlson further discloses the hearing aid, wherein the microphone system (1) and the signal processing components, may be detachably combined in modular manner.

Regarding claims 4 and 6-7, Carlson does not clearly show at least two microphones for dual channel signal processing as claimed. Since providing a dual or multi channel signal processing in hearing aid, especially with more than one microphone is very well known in the art. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated to provide at least two microphones and signal processing channels for the hearing aid, in order to enhance the performance of the hearing aid, such as directional capability.

#### ***Response to Amendment***

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the

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number for fax machine is (703)-305-9508. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.



SUHAN NI  
PATENT EXAMINER

Suhan Ni  
Primary Examiner  
Art Unit 2643  
USPTO.

March 17, 2004